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Patent Abstracts of Japan

PUBLICATION NUMBER : 09201223
PUBLICATION DATE : 05-08-97

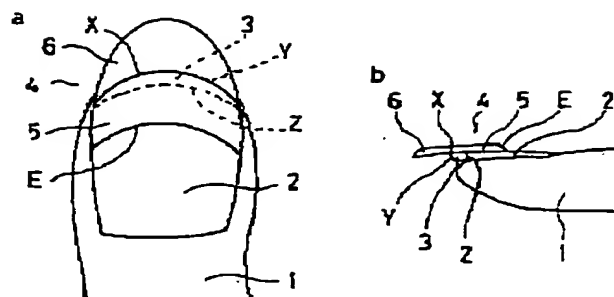
APPLICATION DATE : 26-01-96
APPLICATION NUMBER : 08033024

APPLICANT : KAMEMIZU KAGAKU KOGYO KK:

INVENTOR : KAMEMIZU TADASHIGE:

INT.CL. : A45D 31/00

TITLE : ARTIFICIAL NAIL



ABSTRACT : PROBLEM TO BE SOLVED: To provide an artificial nail, which is similar to a natural nail in an aesthetic sense as well, with no danger in the germ infection of the natural nail by forming the plastic artificial nail, which is adhered onto the natural nail of a human being, from a transparent adhesive part to be adhered onto the natural nail and a non-transparent or semi-transparent extended part similar to the tip of the nail.

SOLUTION: Such a plastic artificial nail 4 is composed of a transparent adhesive part 5 to be adhered onto a natural nail 2 and a non-transparent or semi-transparent extended part 6, which is similar to the tip of the natural nail 2, for extending a nail tip 3. The adhesive part 5 and the extended part 6 are integrally formed and the adhesive part 5 is adhered onto the natural nail 2. When mounting the artificial nail 4 onto the natural nail 2, first of all, any artificial nail formed optimum for the nail of a user herself/himself is selected from artificial nails 4 variously formed big and small and its shape such as length and width is arranged as needed. Next, dirt on her/his own nail, namely, on the natural nail 2 is removed by alcohol and sterilized, the instantaneous adhesive agent of cyanoacrylate is applied thereafter, and the artificial nail 4 is fitted and adhered at any prescribed position.

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(19) 日本国特許庁 (J P)

(12) 公開特許公報 (A)

(11) 特許出願公開番号

特開平9-201223

(43) 公開日 平成9年(1997)8月5日

(51) IntCl.⁸
A 4 5 D 31/00

識別記号

庁内整理番号

F I
A 4 5 D 31/00

技術表示箇所

審査請求 有 請求項の数 4 F D (全 7 頁)

(21) 出願番号 特願平8-33024

(22) 出願日 平成8年(1996)1月26日

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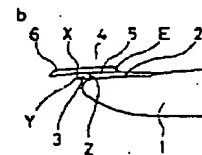
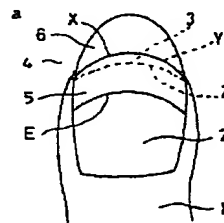
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(54) 【発明の名称】 人工爪

(57) 【要約】

【課題】 装着した状態で視覚的に天然爪と同様の自然感を有し、装着を簡単にする。

【解決手段】 天然爪2に接着する透明な接着部5と、爪先3を延長する、爪先3と類似の不透明或いは半透明な延長部6とからなる。



2 天然爪
3 爪先
4 人工爪
5 接着部
6 延長部

【特許請求の範囲】

【請求項1】 人の天然爪に接着し、天然爪の爪先を延長するプラスチック製の人工爪であって、天然爪に接着する透明な接着部と、爪先を延長する、爪先と類似の不透明或いは半透明な延長部とからなることを特徴とする人工爪。

【請求項2】 人の天然爪に接着し、天然爪の爪先を延長するプラスチック製の人工爪であって、天然爪に接着する接着部と、爪先を延長する延長部とからなり、延長部と、接着部の先端から0.1～5.0mm後方の範囲迄が、天然爪の爪先と類似の不透明或いは半透明であり、接着部の前記範囲外が透明であることを特徴とする人工爪。

【請求項3】 接着部の肉厚が後端側に次第に薄くなっていることを特徴とする請求項1又は請求項2記載の人工爪。

【請求項4】 接着部の肉厚が延長部の肉厚より薄いことを特徴とする請求項1又は請求項2記載の人工爪。

【発明の詳細な説明】**【0001】**

【発明の属する技術分野】本発明は、人の天然爪に接着して取り付け、天然爪の爪先を延長するためのプラスチック製の人工爪に関する。

【0002】

【従来の技術】本来、人の天然爪は、指先の保護の役目や指先で物を把持しやすくする働きをするものであり、長く延びた場合には、危険防止等のため、短く切ることが一般的である。

【0003】しかし、今日では若い女性を中心に指先を美しく見せるために、爪を長く延ばす人も多く、そのため長く延ばした爪が欠けたり、或いは割れたりするケースが多発している。そのような場合はその損傷したつめを短く切れればよいが、その場合その爪だけが短くなり、全体的なバランスからすると不揃いで極めて不自然となる。

【0004】従って、このような場合の措置としては、その短くなった天然爪に人工爪を装着し、人為的に爪を延長することが、最も簡単かつ有効な方法となる。

【0005】また、怪我や病気で爪を無くした場合や、割れ爪、折れ爪、変形爪等に対しても現在のところ医学的な解決法はなく、従って、このような場合にも人工爪は有用なものとなる。

【0006】従来、人為的に爪を延ばす手段としては、予め人の天然爪の形に成形されたプラスチック製人工爪を、粘着材によって天然爪全体に接合するという方法が一般的である。

【0007】この方法は極めて容易に爪の延長が行えるものの、テープ状の粘着材で接着するため強度的に弱く、水に触れるとさらに剥離しやすくなるという欠点を有している。従って、通常は24時間から48時間ぐら

いの使用に限られている。また、従来の天然爪全体を覆う方法では人工爪の先端が無感覚となり、爪本来の感覚を失いがちになる。

【0008】さらに、この方法では人工爪が不透明性のプラスチックからなるため、天然爪に接着した場合、色調的に極めて不自然となる。従って、人工爪のみならず天然爪すべてにネイルカラーを塗布しなければならなくなる。そのため、この方法は、爪にネイルカラーを塗布することを好まなく、天然爪本来の自然感を好む人には受け入れ難いものである。

【0009】一方、前記のような天然爪全体を覆う方法を改善するものとして、シアノアクリレート系接着剤により、天然爪の爪先（爪甲遊離部）に人工爪の後端部を少しだけ重なるようにして接着し、取り付ける方法が提案されている。

【0010】この方法は、天然爪全体を覆うものでないため、従来問題となった天然爪の菌感染の心配がなく、また、天然爪の先端部のみに接着するため、爪本来の感覚を失うこともなく、さらに、審美的にも天然爪に近いものが得られる。

【0011】しかし、この方法では、天然爪と人工爪の接着面積が極めて少ないため、実用上充分な接着強度が得られず、装着中に外れてしまうという問題や、爪の破折につながるという問題が生じる。また、天然爪の先端の限られた狭い部分に人工爪を正確に取り付けることは、實際上極めて困難な作業であり、かなりの手先の器用さが要求される。

【0012】一方、天然爪の先端部から1/3ないしは2/3程度を覆う形で、人工爪を装着する方法も一般的に試みられている。

【0013】しかしこの方法でも、前記の天然爪全体を覆う人工爪同様、使用する人工爪が不透明あるいは半透明であり、そのため天然爪に接着した場合、その色調の違いから天然爪と人工爪には明瞭な境目が生じる。

【0014】この場合、天然爪を傷付けることなく、人工爪の接着部表面のみを紙やすり等で削ることにより、前記境目がある程度目立たなくすることは可能であるが、そのためにはかなりの熟練した技術と多くの時間が必要となり、一般の人には相当の困難さを伴う。

【0015】また、この場合でも、爪先と爪床の境界部に生じるライン（イエローライン）は不鮮明となり、天然爪本来の自然感を得られない。従ってこの場合も、爪全体にネイルカラーを塗布することが前提となる。

【0016】さらに、人工爪を形成する別の手段として、裏側に粘着剤を塗布した型紙を指先に装着し、その型紙及び天然爪上に、小筆の先で粉と液を混合させたアクリル系常温硬化型レジン塗布し、硬化後、爪切り、やすり等で形を整えるという方法もある。この方法は、各個人の爪の形状にピッタリ一致した状態で人工爪を形成し得るため、審美的に優れた自然感のある人工爪を装

着することが可能となる。

【0017】しかし、實際上、粉液混合物を正確に爪先に築盛するには、かなりの熟練と高度な技術が必要となり、個人で行うにはあまりにも困難な作業となる。さらに、使用する液成分（メタクリル酸エステル）は臭いが強く、かつ皮膚に対する刺激性も強いことから、その取り扱いにも充分なる注意が必要となる。

【0018】

【発明が解決しようとする課題】本発明は、従来の前記人工爪にみられる問題点に留意し、一般の人が自分一人で簡単に装着でき、かつ、装着したものが視覚的に天然爪と同様の自然感を保有し、敢えてネイルカラーを塗らなくてもよいような人工爪を提供することを目的とする。

【0019】

【課題を解決するための手段】前記課題を解決するために、本発明の人工爪は、天然爪に接着する透明な接着部と、天然爪の爪先を延長する、爪先と類似の不透明或いは半透明な延長部とからなるものである。

【0020】すなわち、天然爪に接着する部分、即ち接着部が透明であり、天然爪の爪先を延長する部分、即ち延長部が、天然爪の爪先と類似の不透明或いは半透明である。

【0021】従って、本発明の人工爪の接着部が透明であるため、透明性の接着剤を用いて天然爪に装着した場合、人工爪の接着部は下地を透過して天然爪と全く同一の弱い赤味を有した色調となり、そのため、人工爪装着に伴う模造感、不自然感が解消される。

【0022】さらに、審美的な問題から爪先の狭い部分のみに限定して人工爪を接着するという必要は全く無く、天然爪の広い範囲に接着することが可能となる。そのため、接着操作は極めて容易となり、一般の人でも自分一人で簡単に装着することが可能となる。また、接着面積が大きくとれることにより、接着強度は大幅に向上し、実用上充分な強度が得られる。

【0023】一方、本発明の人工爪の場合、天然爪全体を覆うことももちろん可能ではあるが、湾曲した天然爪の全面に渡って人工爪を適合させることは極めて困難であり、また、天然爪の保護の観点からも好ましくない。従って、接着面積は、天然爪の1/3～2/3程度を覆うようにすることが好ましく、この場合でも実用上充分な接着強度が得られ、また、人工爪の先端部も天然爪と同様の感覚が得られる。

【0024】また、人工爪の延長部が、不透明あるいは半透明性で、天然爪の爪先と類似した色調であるため、本発明の人工爪を装着した場合、接着部は天然爪本来の色調を有し、延長部も天然爪の爪先と類似した色調となるため、全体的にみて従来の人工爪にみられたような模造感は全く無くなる。従って、敢えてネイルカラーを塗る必要はない。

【0025】

【発明の実施の形態】本発明の実施の形態につき、図を参照して説明する。まず、図1の平面図のa、左側面図のbにおいて、1は人の指、2は指1の先端部の天然爪、3は天然爪2の爪先、4はプラスチック製の人工爪、5は天然爪2に接着する人工爪4の透明な接着部、6は爪先3を延長する人工爪4の延長部であり、爪先3と類似の不透明或いは半透明であり、接着部5と延長部6が一体に形成され、接着部5が天然爪2の1/3～2/3程度を覆うよう天然爪2に接着されている。

【0026】つぎに、人工爪の天然爪への装着について説明する。大小様々な形に成形された人工爪の中から自分の爪に最も合った形状のものを選び出し、必要に応じてはさみややすりで長さ、幅等の形を整える。

【0027】つぎに、自分の爪、すなわち天然爪の表面の汚れをアルコールで除去し、消毒した後、シアノアクリレート系の瞬間接着剤を塗布し、ただちに人工爪を所定の位置に取り付けて接着する。

【0028】また、接着剤として粉液混合型のアクリル系常温硬化型レジンをを用いることも可能であり、その場合は、小筆の先で混合した材料を天然爪及び人工爪の接着部に薄く塗布し、接着する。この時、両者を圧接した際に余剰のレジンが生じるので、硬化する前にそれを除去しておくことが必要である。

【0029】そして、本発明の人工爪は、接着部が透明であるため、天然爪に装着した場合、人工爪を付けていることがほとんど目立たず、実用上充分な自然感が得られる。

【0030】しかし、人工爪の後端縁E、すなわち天然爪との境界部には、人工爪の接着部の肉厚に相当する段差が生じ、それが自然感の妨げとなるが、この段差は紙やすり等で削ることにより無くすることができる。

【0031】また、左側面図の図2のaに示すように、人工爪4の接着部5の肉厚を後端側に次第に薄くなるようにする。このことにより、前記境界部の段差を少なくすることができる。従って、研磨作業を最小限に抑えることが可能となり、作業時間が短縮できる。

【0032】さらに、前記境界部の段差を少なくするため、人工爪4の接着部5の肉厚はできるだけ薄い方がよく、その意味から図2のbに示すように、接着部5全体の肉厚を延長部よりも薄くすることが好ましい。

【0033】この場合、人工爪4の裏側に、接着部5と延長部6との境に段差が生じるため、天然爪2への人工爪4の位置決めがしやすくなり、装着が容易となる。

【0034】つぎに、本発明の人工爪を天然爪に装着するに際しては、図1に示すように、人工爪4のイエローラインX（透明部と、不透明あるいは半透明の部分との境界線）と、天然爪2の爪先3の先端のラインYを一致させることが望ましい。

【0035】しかし、實際上、両ラインX、Yを完全に

【0052】また、透明部を成形する部分の金型の表面を、鏡面仕上げとし、不透明部を成形する部分の金型の

表面を梨地仕上げとすることにより、2色構造体を得ることも可能である。

【0053】また、透明部と不透明部を別々に成形し、後に接着する方法、或いは透明材料で人工爪全体の形状を成形した2枚のシートの間に、不透明フィルムをサンドイッチする方法等、種々の方法を採用し得る。

【0054】本発明の人工爪の厚みは、使用するプラスチックの強度、柔軟性等により異なるが、0.2~1.0mmであることが好ましく、この範囲内であれば実用上十分な強度と実質上違和感の無い装着感が得られる。

【0055】つぎに、人工爪の成形法について説明する。2色成形法には、コア回転方式、コアバック方式、キャビティスライド方式、ストリッププレート回転方式等いくつかの方法がある。しかし、金型設計の容易さの面から、コア回転方式を採用することが好ましい。

【0056】このコア回転方式は、1次成形品を金型コアに付け、このコアを回転させ、2次金型により2次成形を行うものである。

【0057】つぎに、コア回転方式の2色射出成形機を用い、本発明の図6dに示す人工爪を成形する場合を、図7ないし図14について説明する。

【0058】それらの図において、7は固定プラテン、8、9は固定プラテン7の後部及び前部に設けられた1次射出装置及び2次射出装置であり、1次射出装置8からは不透明或いは半透明の材料が射出され、2次射出装置9から透明の材料が射出される。10は固定プラテン7に保持された固定金型、11、12は固定金型10の後部及び前部に形成された形状の異なる第1キャビティ及び第2キャビティであり、第1キャビティ11は不透明或いは半透明の材料の成形に、第2キャビティ12は透明の材料の成形に用いられる。

【0059】13は可動プラテン、14は可動プラテン13に設けられた金型反転装置、15は金型反転装置14に保持された可動金型、16、17は第1コア及び第2コアであり、両コア16、17は形状、寸法的には全く同一のものであり、金型反転装置14の回転軸を中心とした点対称に位置し、金型反転装置14の180度の回転により、第1コア16は第2コア17の位置に、第2コア17は第1コア16の位置に、それぞれ移動し、可動プラテン13の右方への移動により、両金型10、15が接合し、両コア16、17が両キャビティ11、12に対接するようになっている。

【0060】そして、図7に示す可動プラテン13が固定プラテン7から離反した状態から、可動プラテン13が右方へ移動し、図8に示すように、両金型10、15が接合する。

【0061】つぎに、図9に示すように、第1キャビティ11と第1コア16とで形成される型内に、1次射出装置8から不透明或いは半透明の材料が射出され、その後、図10に示すように、可動プラテン13が左方へ移

動し、1色成形品18が第1コア16に付いたままであり、スプルー・ランナ19のみが突き出されて除去される。

【0062】つぎに、金型反転装置14により、図11に示すように、可動金型15が180度回転され、可動プラテン13が右方へ移動し、図12に示すように、両金型10、15が接合する。

【0063】そして、図13に示すように、2次射出装置9から透明の材料が、第2キャビティ12と第1コア16とで形成される型内に射出され、同時に、1次射出装置8から不透明或いは半透明の材料が、第1キャビティ11と第2コア17とで形成される型内に射出され、その後、図14に示すように、可動プラテン13が左方へ移動し、前記と同様の1色成形品18は第2コア17に付いたままであり、それ以外の2色成形品20、そのスプルー・ランナ21、前記と同様のスプルー・ランナ19が突き出される。

【0064】以後、図11ないし図14のプロセスが繰り返し行われ、2色形成品20が得られる。

【0065】

【発明の効果】本発明は、以上説明したように構成されているので、以下に記載する効果を奏する。本発明の人工爪は、天然爪に接着する透明な接着部と、天然爪の爪先を延長する、爪先と類似の不透明或いは半透明な延長部とからなり、天然爪に接着する部分が透明であり、天然爪の爪先を延長する部分が天然爪の爪先と類似の不透明或いは半透明であるため、接着部を透明性の接着剤を用いて天然爪に装着した場合、人工爪の接着部は下地を透過して天然爪と全く同一の弱い赤味を有した色調となり、そのため、人工爪装着に伴う模造感、不自然感が解消され、天然爪の広い範囲に接着することが可能となり、接着操作が極めて容易であり、かつ、接着強度が大幅に向上する。

【0066】また、延長部も天然爪の爪先と類似した色調となるため、全体的にみて従来の人工爪にみられたような模造感は全く無く、敢えてネイルカラーを塗る必要はない。

【図面の簡単な説明】

【図1】a、bは本発明の実施の形態1の装着状態の平面図及び左側面図である。

【図2】a、bは形態2及び形態3の左側面図である。

【図3】a、bはそれぞれ他の装着状態の平面図である。

【図4】a、bはそれぞれさらに他の装着状態の平面図である。

【図5】形態4の一部の左側面図である。

【図6】a、b、c、d、e、fは形態5、形態6、形態7、形態8、形態9、形態10の一部の左側面図である。

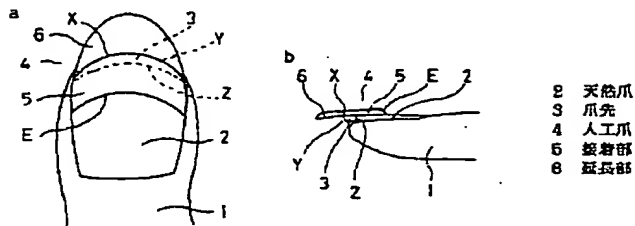
【図7】本発明の成形過程1の切断平面図である。

- 【図8】成形過程2の切断平面図である。
 【図9】成形過程3の切断平面図である。
 【図10】成形過程4の切断平面図である。
 【図11】成形過程5の切断平面図である。
 【図12】成形過程6の切断平面図である。
 【図13】成形過程7の切断平面図である。
 【図14】成形過程8の切断平面図である。

【符号の説明】

- 2 天然爪
 3 爪先
 4 人工爪
 5 接着部
 6 延長部

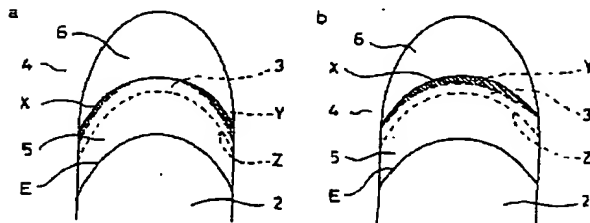
【図1】



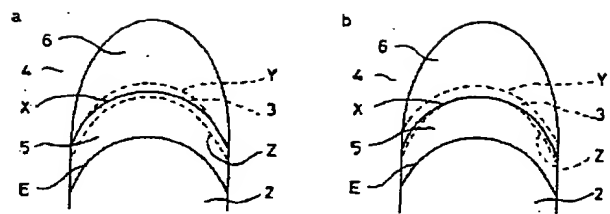
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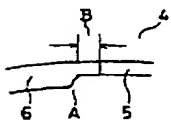
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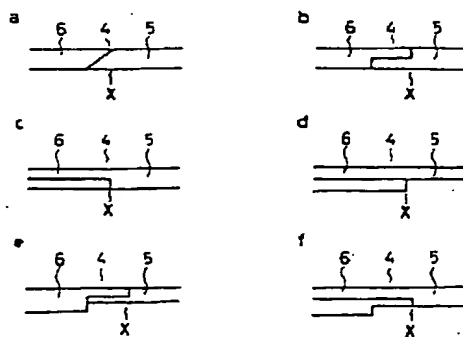
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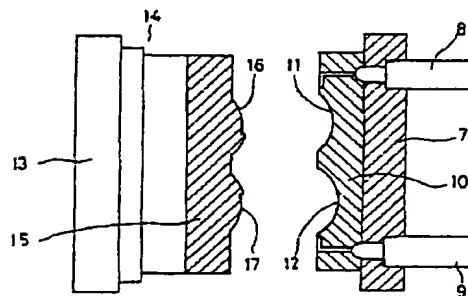
【図5】



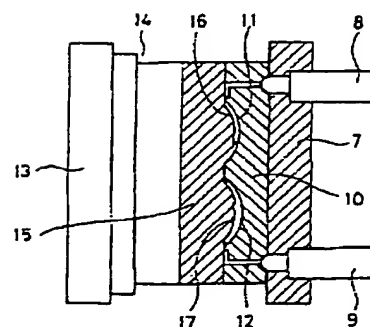
【図6】



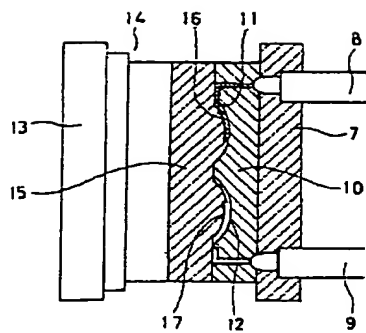
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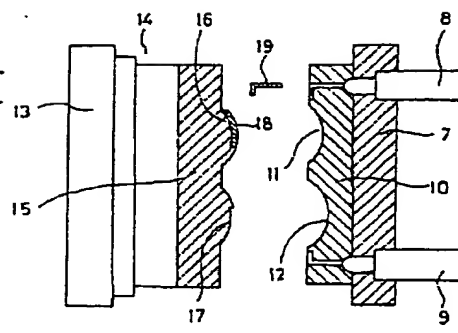
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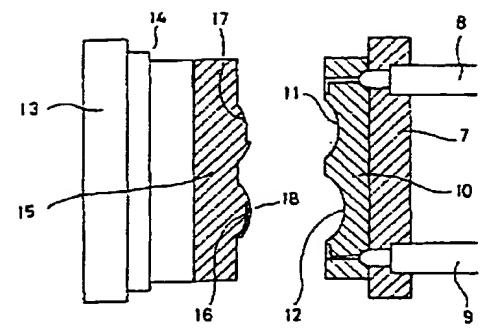
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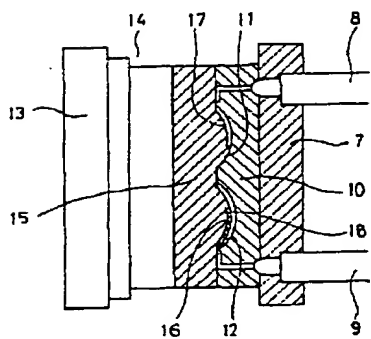
【図10】



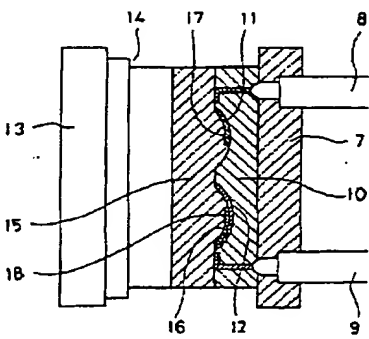
【図11】



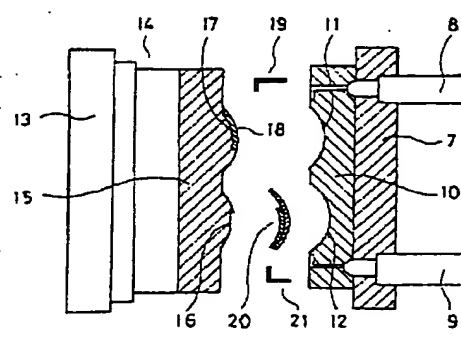
【図12】



【図13】



【図14】



【手続補正書】

【提出日】平成8年2月28日

【手続補正1】

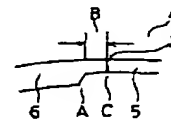
【補正対象書類名】図面

【補正対象項目名】図5

【補正方法】変更

【補正内容】

【図5】



JP Publication No.: 09-201223
Publication Date: August 5, 1997
JP Application No.: 08-033024
Application Date: Jan. 26, 1996

*** NOTICES ***

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1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. **** shows the word which can not be translated.
3. In the drawings, any words are not translated.

[Claim(s)]

[Claim 1] The artificial pawl characterized by consisting of transparent jointing which is the artificial pawl made from plastics which pastes people's natural pawl and extends the tiptoe of a natural pawl, and is pasted up on a natural pawl, a tiptoe which extends a tiptoe, and a similar opaque or translucent extension.

[Claim 2] The artificial pawl characterized by pasting people's natural pawl, consisting of jointing which is the artificial pawl made from plastics which extends the tiptoe of a natural pawl, and is pasted up on a natural pawl, and an extension which extends a tiptoe, for the tiptoe of a natural pawl and resemblance of from the head of an extension and jointing to the range of 0.1-5.0mm back being opaque or translucent, and the outside of said range of jointing being transparent.

[Claim 3] The artificial pawl according to claim 1 or 2 with which thickness of jointing is characterized by becoming thin gradually at the back end side.

[Claim 4] The artificial pawl according to claim 1 or 2 characterized by the thickness of jointing being thinner than the thickness of an extension.

[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention relates to the artificial pawl made from the plastics for pasting people's natural pawl and extending the tiptoe of installation and a natural pawl.

[0002]

[Description of the Prior Art] Originally, when the work make an object easy to grasp is carried out and it extends for a long time in the duty and fingertip of protection of a fingertip, as for people's natural pawl, cutting short is common because of safety etc.

[0003] However, in order to show a fingertip beautifully focusing on a young woman by the end of today, the cases where the pawl which those who extend a pawl for a long time also extended for a long time is missing, or it is divided are occurring frequently. In such a case, although what is necessary is just to turn off the damaged click short, in that case, only the pawl becomes short and becomes irregular and very unnatural, considering overall balance.

[0004] Therefore, as a measure in such a case, the natural pawl which became short is equipped with an artificial pawl, and it becomes an easiest and effective approach to extend a pawl artificially.

[0005] Moreover, it is sick, and also to an injury, the case where a pawl is lost, a crack pawl, a crease pawl, a deformation pawl, etc., there is no solution medical now, therefore, also in such a case, an artificial pawl becomes with a useful thing.

[0006] The method of joining the artificial pawl made from plastics beforehand fabricated by the form of people's natural pawl to the whole natural pawl by adhesion material as a means which extends a pawl artificially conventionally is common.

[0007] Although this approach can extend a pawl very easily, if it is weak in reinforcement and touches water in order that it may paste up by tape-like adhesion material, it has the fault of further becoming easy to exfoliate. Therefore, it is usually restricted to the activity of 24 to about 48 hours. Moreover, by the approach of covering the conventional whole natural pawl, the head of an artificial pawl tends to become insensible and the sensation of pawl original tends to be lost.

[0008] Furthermore, by this approach, since an artificial pawl consists of opaque plastics, when a natural pawl is pasted, it becomes very [in color tone] unnatural. It must stop therefore, having to apply a nail color not only to an artificial pawl but to all natural pawls. Therefore, it is hard to accept this approach in those who do not like applying a nail color to a pawl and like the natural feeling of natural pawl original.

[0009] The method of pasting up and attaching the back end section of an artificial pawl in the tiptoe (nail plate isolation section) of a natural pawl with cyanoacrylate adhesive,

as what improves the approach of on the other hand covering the above whole natural pawl, as only a few laps is proposed.

[0010] The thing near a natural pawl is obtained also still more aesthetic, without losing the sensation of pawl original, in order that this approach may not have worries about bacillus infection of the natural pawl which became a problem conventionally since it was not a wrap thing and may paste up the whole natural pawl only on the point of a natural pawl.

[0011] However, by this approach, since there is very little adhesion area of a natural pawl and an artificial pawl, practically sufficient bond strength is not obtained but the problem of separating during wearing, and the problem of leading to breakage of a pawl arise. Moreover, it is an in practice very difficult activity to attach an artificial pawl in accuracy at the narrow part to which the head of a natural pawl was restricted, and a remarkable hand's dexterity is required.

[0012] On the other hand, it is a wrap form in 1/3 or about 2/3 from the point of a natural pawl, and, generally the method of equipping with an artificial pawl is also tried.

[0013] However, also by this approach, the artificial pawl which uses the aforementioned whole natural pawl like a wrap artificial pawl is opaque or translucent, therefore when a natural pawl is pasted, on a natural pawl and an artificial pawl, a clear boundary line arises from the difference in that color tone.

[0014] In this case, although it is possible for it not to be conspicuous to some extent and to carry out said boundary line by deleting only the jointing front face of an artificial pawl with a sandpaper etc., without damaging a natural pawl, for that purpose, the time amount of the remarkable skilled technique and remarkable skilled many is needed, and considerable difficulty is followed on ordinary men.

[0015] Moreover, even in this case, the line (yellow line) produced in the boundary section of a tiptoe and the nail matrix becomes indistinct, and the natural feeling of natural pawl original is not obtained. Therefore, it will be the requisite to apply a nail color to the whole pawl also in this case.

[0016] Furthermore, a fingertip is equipped with the stencil which applied the binder to the background as an another means to form an artificial pawl, the acrylic room-temperature-setting mold resin which mixed liquid with powder at the point of a small

brush on the stencil and a natural pawl is applied, and there is also a method of preparing a form with nail clippers, a file, etc. after hardening. Since this approach can form an artificial pawl in the condition that it was in agreement with the configuration of an individual's pawl exactly, it becomes possible [equipping with an artificial pawl with the natural feeling which was excellent aesthetic].

[0017] However, in order to **** actual top and powder liquid mixture to tiptoes at accuracy, remarkable skill and an advanced technique are needed and it becomes an activity too much difficult for carrying out individually. Furthermore, since the liquid component (methacrylic ester) to be used has a strong smell and stimulative [over the skin] is strong, the caution which becomes enough is needed also for the handling.

[0018]

[Problem(s) to be Solved by the Invention] With careful attention to the trouble that said conventional artificial pawl sees, that with which ordinary persons could equip with easily by themselves, and it equipped holds the same natural feeling as a natural pawl visually, and this invention aims at offering the artificial pawl which does not need to dare apply a nail color. [one]

[0019]

[Means for Solving the Problem] In order to solve said technical problem, the artificial pawl of this invention consists of transparent jointing pasted up on a natural pawl, and the tiptoe and the similar opaque or translucent extension which extend the tiptoe of a natural pawl.

[0020] that is, the part pasted up on a natural pawl, i.e., jointing, is transparent, and the tiptoe of a natural pawl and resemblance of the part which extends the tiptoe of a natural pawl, i.e., an extension, are opaque -- or it is translucent.

[0021] Therefore, since jointing of the artificial pawl of this invention is transparent, when a natural pawl is equipped using the adhesives of transparency, jointing of an artificial pawl penetrates a substrate, and serves as a color tone with the completely same weak redness as a natural pawl, therefore a feeling of imitation and unnatural feeling accompanying artificial pawl wearing are canceled.

[0022] Furthermore, it limits only to a part with a narrow tiptoe from an aesthetic problem, there is no need of saying that an artificial pawl is pasted up, and it becomes

possible to paste the range where a natural pawl is large. Therefore, adhesion actuation becomes very easy and it also enables ordinary men to equip simply by itself. [one] Moreover, by the ability taking a large adhesion area, bond strength improves substantially and practically sufficient reinforcement is obtained.

[0023] It is very difficult it to be also possible for to cover the whole natural pawl, of course in the case of the artificial pawl of this invention, but to cross all over the curved natural pawl and to fit an artificial pawl on the other hand, and it is not desirable from a viewpoint of protection of a natural pawl. Therefore, as for adhesion area, it is desirable to cover about 1 of a natural pawl / three to 2/3, and bond strength sufficient even in this case practically is obtained, and the sensation as a natural pawl also with the same point of an artificial pawl is acquired.

[0024] Moreover, since the extensions of an artificial pawl are the tiptoe of a natural pawl, and a similar color tone in opacity or a translucency, when it equips with the artificial pawl of this invention, a feeling of imitation which jointing had the color tone of natural pawl original, saw on the whole since an extension also served as a tiptoe of a natural pawl and a similar color tone, and was seen by the conventional artificial pawl is completely lost. Therefore, it is necessary not to dare apply a nail color.

[0025]

[Embodiment of the Invention] With reference to drawing, it explains about the gestalt of operation of this invention. In a of the top view of drawing 1 , and b of a left side view people's finger and 2 1 First, the natural pawl of the point of a finger 1, Transparent jointing of the artificial pawl 4 with which 3 pastes up the tiptoe of the natural pawl 2, the artificial pawl of the product [4] made from plastics, and 5 on the natural pawl 2, 6 is the extension of the artificial pawl 4 which extends a tiptoe 3, a tiptoe 3 and its resemblance are opaque or translucent, jointing 5 and an extension 6 were formed in one, and jointing 5 has pasted up about 1 of the natural pawl 2 / three to 2/3 on the method of wrap natural pawl 2.

[0026] Below, wearing on the natural pawl of an artificial pawl is explained. size -- the thing of the configuration which suited its pawl most is selected from the artificial pawls fabricated by various forms, it inserts if needed, and forms, such as die length and width of face, are prepared a little by grinding.

[0027] Next, after removing and disinfecting the dirt of the front face of one's pawl, i.e., a natural pawl, in alcohol, the instantaneous adhesive of a cyanoacrylate system is applied, and an artificial pawl is immediately attached in a position and it pastes up.

[0028] Moreover, it is also possible to use the acrylic room-temperature-setting mold resin of a powder liquid hybrid model as adhesives, the ingredient mixed at the point of a small brush is thinly applied to jointing of a natural pawl and an artificial pawl in that case, and it pastes up. Since excessive resin arises at this time when the pressure welding of both is carried out, it is required to remove it, before hardening.

[0029] And since the artificial pawl of this invention has transparent jointing, when a natural pawl is equipped, it is hardly conspicuous to have attached the artificial pawl and practically sufficient natural feeling is obtained.

[0030] However, although the level difference equivalent to the thickness of jointing of an artificial pawl arises on the back end edge E of an artificial pawl, i.e., the boundary section with a natural pawl, and it serves as hindrance of a natural feeling at it, this level difference can be lost by deleting with a sandpaper etc.

[0031] Moreover, the thickness of the jointing 5 of the artificial pawl 4 is made to become thin gradually at a back end side, as shown in a of drawing 2 of a left side view. The level difference of said boundary section can be lessened by this. Therefore, it becomes possible to suppress a polish activity to the minimum, and working hours can be shortened.

[0032] Furthermore, in order to lessen the level difference of said boundary section, as shown in b of drawing 2 from the semantics, it is desirable [thickness / the thinner possible one of the thickness of the jointing 5 of the artificial pawl 4 is good, and] to make thickness of the jointing 5 whole thinner than an extension.

[0033] In this case, since a level difference arises on the boundary of jointing 5 and an extension 6, it becomes easy to carry out positioning of the artificial pawl 4 to the natural pawl 2 to the background of the artificial pawl 4, and wearing becomes easy on it.

[0034] As the artificial pawl of this invention is shown on the occasion of the next at drawing 1 for equipping a natural pawl, it is desirable to make in agreement the yellow line X of the artificial pawl 4 (borderline of the area pellucida and an opaque or translucent part) and the line Y at the head of the tiptoe 3 of the natural pawl 2.

[0035] However, it is next to impossible to make both [a actual top and] the lines X and Y thoroughly in agreement, and as shown in a of drawing 3 , and b, it is common on both the lines X and Y to produce some gap. If such a gap is produced, the clearance part (shadow area) of the gap will become transparent, and will become visual very unnatural. In addition, Z is the yellow line of the natural pawl 2.

[0036] In this case, as shown in a of drawing 4 , the aforementioned problem is solvable by making the location of wearing of the artificial pawl 4 slide to the bottom (root of the nail) side of the natural pawl 2 until the clearance by the gap between both the lines X and Y is lost.

[0037] Furthermore, as shown in b of drawing 4 in this case, the aesthetics after adhesion and a natural feeling improve by equipping with the yellow line Z of the natural pawl 2, and the yellow line X of the artificial pawl 4 so that it may be in agreement as much as possible.

[0038] Moreover, also when using the artificial pawl 4 which made thinner than the thickness of an extension 6 thickness of jointing 5 shown in b of drawing 2 , as shown in drawing 5 , it is desirable for the line A of a level difference and the line Y at the head of the tiptoe 3 of the natural pawl 2 accompanying the difference in thickness to be thoroughly in agreement. However, if a gap arises among both the lines A and Y, since the part becomes transparent, it will become very unnatural.

[0039] When there is a level difference, a stowed position cannot be made to slide to a root-of-the-nail side, although it is possible to lose the clearance by gap by making a stowed position slide to the root-of-the-nail side of the natural pawl 2 a little on the other hand when there is no level difference by the difference in the thickness shown in a of drawing 2 .

[0040] In this case, as shown in drawing 5 , the aforementioned problem is solvable by extending the yellow line X of the artificial pawl 4 from the line A of a level difference to the location C which only the part B with a width of face of 0.1-5.0mm made shift to a root-of-the-nail side.

[0041] That is, when the head of the natural pawl 2 was worn and carried out according to the line A of the level difference of the artificial pawl 4, even if the gap of some was between the head line Y of the tiptoe of the natural pawl 2, and the line A of a level

difference, the gap can be covered by the opaque or translucent part B prepared in the contact section 5 side, and unnaturalness is canceled.

[0042] In this case, aesthetics improves further by equipping with the yellow line X of the artificial pawl 4, and the yellow line Z of the natural pawl 2 further, so that it may be in agreement as much as possible.

[0043] Although the range of the part B shown in drawing 5 is set up with 0.1mm - 5.0mm here Having set this minimum value to 0.1 the gap with the line Y at the head of the tiptoe 3 of the natural pawl 2 and the line A of a level difference which are produced when it equips with the artificial pawl 4 Parenchyma is impossible for stopping fewer than 0.1mm, therefore it is because the width of face of Part B is needed 0.1mm also at the lowest in order to hide the clearance by gap.

[0044] Moreover, having set maximum to 5.0mm is based on the following reasons. for example, when equipping with the artificial pawl 4 which has a level difference in the natural pawl 2 with a long tiptoe 3, in order to hide only the gap with the line Y at the head of a tiptoe 3, and the line A of the level difference of the artificial pawl 4 Although there is no need of taking so large the width of face of Part B, in order to make the yellow line X of the artificial pawl 4 mostly in agreement with the yellow line Z of the natural pawl 2 The range of Part B had to be expanded by the die length equivalent to the tiptoe 3 of the natural pawl 2, and since it is not common to make the tiptoe 3 of the natural pawl 2 longer than 5mm, the maximum of the width of face of Part B has been set up with 5.0mm. In addition, the width of face of Part B usually has 0.5-1.5 most desirablemm.

[0045] Below, manufacture of the artificial pawl of this invention is explained. From the need of constituting jointing of transparency, it is necessary for a kind to use the thermoplastics of transparency at least. The thing transparent and colorless as much as possible of this jointing is desirable from the need of making the color of a substrate penetrating.

[0046] However, as long as it is extent which does not change the color of a substrate on parenchyma, some colors of transparency may be attached. Moreover, some redness may be given in order to express a healthier pawl.

[0047] As an example of the thermoplastics which can be used for the artificial pawl of this invention, polymethylmethacrylate, polystyrene, a polycarbonate, polyvinyl chloride,

the poly amine, polyether sulphone, polyethylene terephthalate, a polyamide, ABS plastics, acetate system plastics, etc. are contained.

[0048] What is necessary is on the other hand, it to be desirable to use the same ingredient from fields, such as an adhesive property and a moldability, and to add a pigment, a coloring agent, etc. to said transparency resin, and just to prepare in that case as thermoplastics which constitutes an extension, so that a color tone may be acquired by the opacity of resemblance to the tiptoes of a natural pawl, or the translucency list although there is no need of daring use the thing of transparency.

[0049] In addition, an extension may be structurally compounded with a transparency ingredient, as long as the whole does not necessarily need to consist of only opaque or translucent ingredients and opacity or a translucency is acquired visually.

[0050] Moreover, although the usual 2 color fabricating method or a usual insert molding method is employable in order to obtain the transparency of the artificial pawl of this invention, and opaque or translucent 2 color structure, it is desirable to adopt the 2 color fabricating method from the field of productivity. In this case, various gestalten as shown in a, b, c, d, e, and f of drawing 6 can be taken.

[0051] As for a of this drawing, the boundary of jointing 5 and an extension 6 inclines. Next, as for b of this drawing, the boundary of jointing 5 and an extension 6 is the configuration of a level difference. Next, c of this drawing is opaquely [the thickness of jointing 5 and an extension 6 is almost the same, and / the upper half of an extension 6 / transparency and a lower half], or translucent. Moreover, d of this drawing has the same thick transparency part as jointing 5 also in an extension 6, and an opaque or translucent part is in the transparency part bottom of the extension 6. Moreover, the gestalt shown in e of this drawing and f is also possible.

[0052] Moreover, it is also possible to obtain 2 color structure by making into mirror finish the front face of the metal mold of the part which fabricates the area pellucida, and making into satin finish the front face of the metal mold of the part which fabricates the opaque section.

[0053] Moreover, various approaches, such as the approach of sandwiching an opaque film, can be adopted between the sheets of two sheets which fabricated the area pellucida

and the opaque section independently and fabricated the configuration of the whole artificial pawl by the approach of pasting up behind, or the transparent material.

[0054] Although the thickness of the artificial pawl of this invention changes with the reinforcement of the plastics to be used, flexibility, etc., it is desirable that it is 0.2-1.0mm, and if it is this within the limits, the feeling of wearing without practically sufficient reinforcement and parenchyma top sense of incongruity will be obtained.

[0055] Below, the method of fabricating an artificial pawl is explained. There are some approaches, such as a core rotary system, a core back method, a cavity slide method, and a stripper plate rotary system, in the 2 color fabricating method. However, it is desirable to adopt a core rotary system from the field of the ease of a metal mold design.

[0056] This core rotary system attaches primary mold goods to a metal mold core, rotates this core, and performs secondary shaping with secondary metal mold.

[0057] Below, 2 color injection molding machine of a core rotary system is used, and the case where the artificial pawl shown in drawing 6 d of this invention is fabricated is explained about drawing 7 thru/or drawing 14.

[0058] In those drawings, it is a fixed platen, the primary injection equipment with which 7 was prepared in eight and nine were prepared in the back and anterior part of the fixed platen 7, and secondary injection equipment, and from primary injection equipment 8, an opaque or translucent ingredient is injected and the ingredient of transparence is injected from secondary injection equipment 9. The fixed metal mold with which 10 was held at the fixed platen 7, and 11 and 12 are the 1st cavity and the 2nd cavity from which the configuration formed in the back and anterior part of the fixed metal mold 10 differs, and the 2nd cavity 12 is used for shaping of an ingredient opaque [the 1st cavity 11] or translucent at shaping of the ingredient of transparence.

[0059] The metal mold turnover device with which 13 was prepared in the movable platen and 14 was prepared in the movable platen 13, The movable die with which 15 was held at the metal mold turnover device 14, and 16 and 17 are the 1st core and the 2nd core. Both the cores 16 and 17 are a configuration and what is dimensional completely the same, and it is located in the point symmetry centering on the revolving shaft of the metal mold turnover device 14. By 180 revolutions of the metal mold turnover device 14 The 1st core 16 moves to the location of the 2nd core 17, the 2nd core 17 moves to the

location of the 1st core 16, respectively, by migration to the method of the right of the movable platen 13, both the metal mold 10 and 15 joins and both the cores 16 and 17 opposite-** to both the cavities 11 and 12.

[0060] And from the condition to which the movable platen 13 shown in drawing 7 deserted the fixed platen 7, the movable platen 13 moves to the method of the right, and as shown in drawing 8 , both the metal mold 10 and 15 joins.

[0061] As an opaque or translucent ingredient is injected from primary injection equipment 8 in the mold formed with the 1st cavity 11 and the 1st core 16 as shown in drawing 9 below and it is shown in drawing 10 after that, the movable platen 13 moves to a left, 1 color mold goods 18 are attached to the 1st core 16, and only the sprue runner 19 is projected and removed.

[0062] Next, with the metal mold turnover device 14, as shown in drawing 11 , a movable die 15 rotates 180 degrees, the movable platen 13 moves to the method of the right, and as shown in drawing 12 , both the metal mold 10 and 15 joins.

[0063] And as shown in drawing 13 , the ingredient of transparence is injected from secondary injection equipment 9 in the mold formed with the 2nd cavity 12 and the 1st core 16. As an opaque or translucent ingredient is simultaneously injected from primary injection equipment 8 in the mold formed with the 1st cavity 11 and the 2nd core 17 and it is shown in drawing 14 after that The movable platen 13 moves to a left, the same 1 color mold goods 18 as the above are attached to the 2nd core 17, and the other 2 color mold goods 20, its sprue runner 21, and the same sprue runner 19 as the above are projected.

[0064] Henceforth, the process of drawing 11 thru/or drawing 14 is performed repeatedly, and 2 color formation article 20 is obtained.

[0065]

[Effect of the Invention] Since this invention is constituted as explained above, it does so the effectiveness indicated below. The artificial pawl of this invention consists of transparent jointing pasted up on a natural pawl, and the tiptoe and the similar opaque or translucent extension which extend the tiptoe of a natural pawl. Since it is [that the part pasted up on a natural pawl is transparent, and the tiptoe of a natural pawl and resemblance of the part which extends the tiptoe of a natural pawl are opaque, or]

translucent, When a natural pawl is equipped with jointing using the adhesives of transparency, jointing of an artificial pawl penetrates a substrate and serves as a color tone with the completely same weak redness as a natural pawl. The sake, A feeling of imitation and unnatural feeling accompanying artificial pawl wearing are canceled, and it becomes possible to paste the range where a natural pawl is large, and adhesion actuation is very easy and bond strength improves substantially.

[0066] Moreover, since an extension also serves as a tiptoe of a natural pawl, and a similar color tone, at all, there is no feeling of imitation which saw on the whole and was seen by the conventional artificial pawl, and it does not need to dare apply a nail color.

[Brief Description of the Drawings]

[Drawing 1] a and b are the top views and left side views of a wearing condition of operation of this invention. [of a gestalt 1]

[Drawing 2] a and b are the left side views of a gestalt 2 and a gestalt 3.

[Drawing 3] a and b are the top views of other wearing conditions, respectively.

[Drawing 4] a and b are the top views of the wearing condition of respectively further others.

[Drawing 5] They are some left side views of a gestalt 4.

[Drawing 6] a, b, c, d, e, and f are some left side views of a gestalt 5, a gestalt 6, a gestalt 7, a gestalt 8, a gestalt 9, and a gestalt 10.

[Drawing 7] It is the cutting top view of the forming process 1 of this invention.

[Drawing 8] It is the cutting top view of a forming process 2.

[Drawing 9] It is the cutting top view of a forming process 3.

[Drawing 10] It is the cutting top view of a forming process 4.

[Drawing 11] It is the cutting top view of a forming process 5.

[Drawing 12] It is the cutting top view of a forming process 6.

[Drawing 13] It is the cutting top view of a forming process 7.

[Drawing 14] It is the cutting top view of a forming process 8.

[Description of Notations]

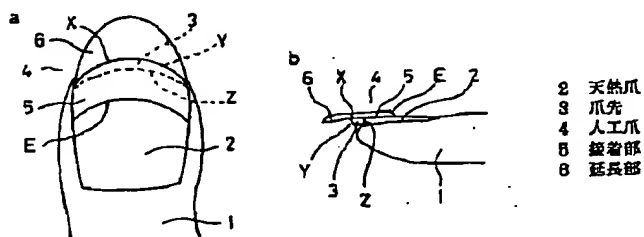
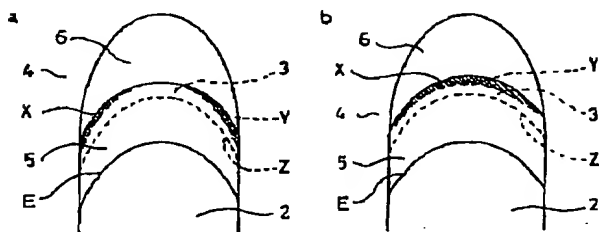
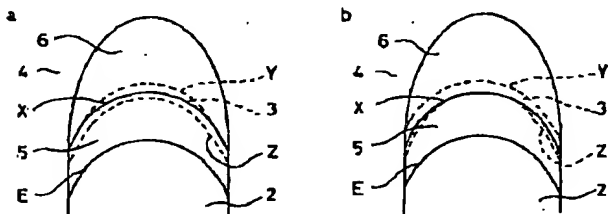
2 Natural Pawl

3 Tiptoe

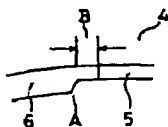
4 Artificial Pawl

5 Jointing

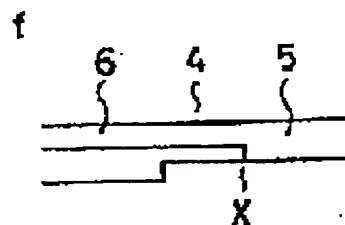
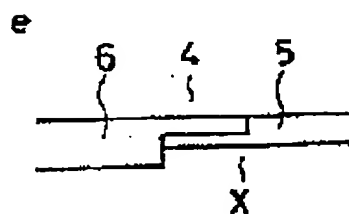
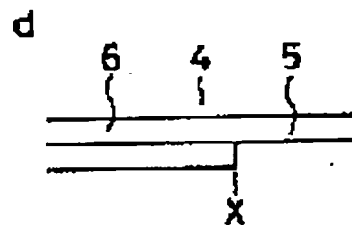
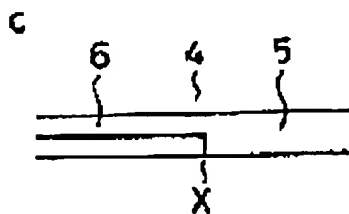
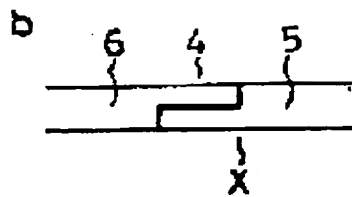
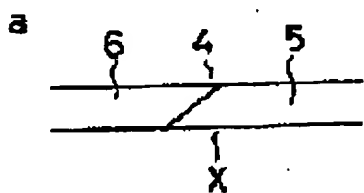
6 Extension

DRAWINGS[Drawing 1][Drawing 2][Drawing 3][Drawing 4]

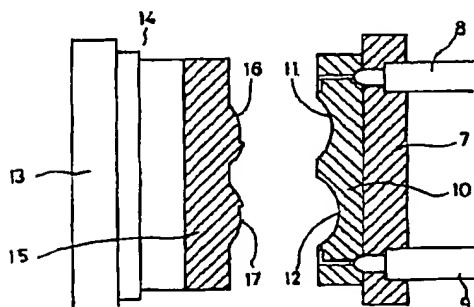
[Drawing 5]

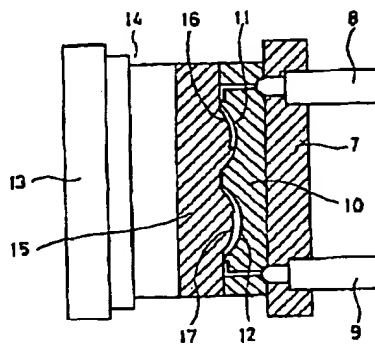
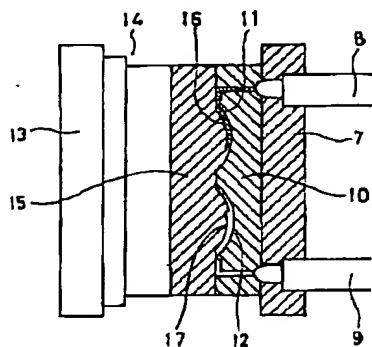
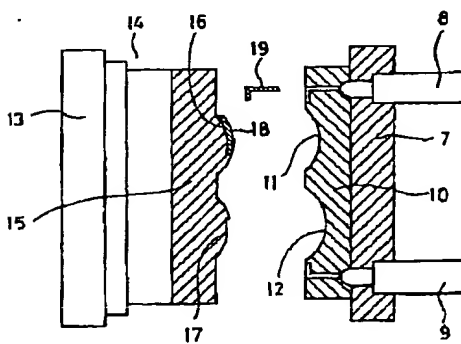


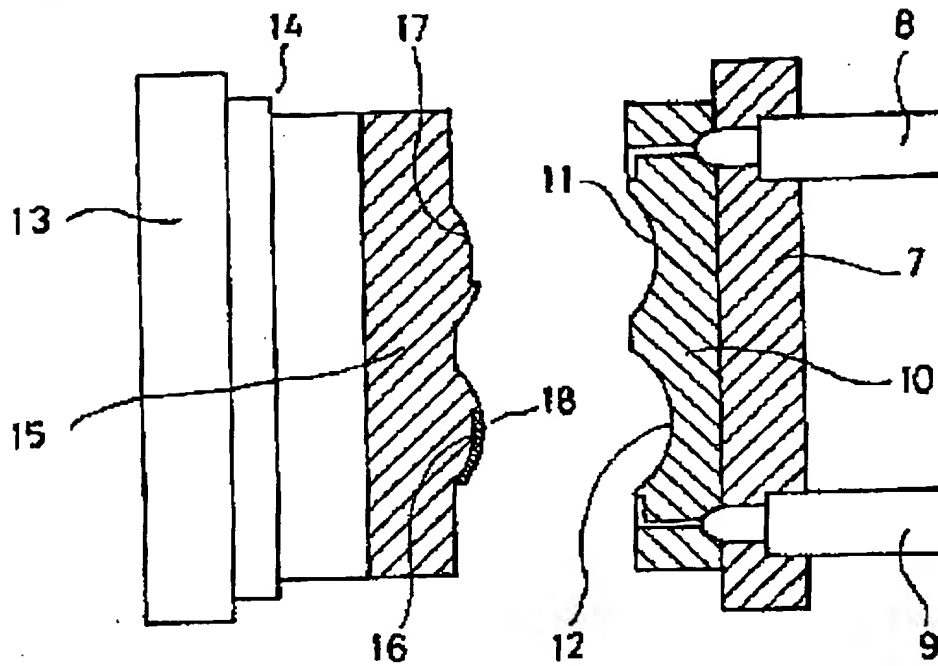
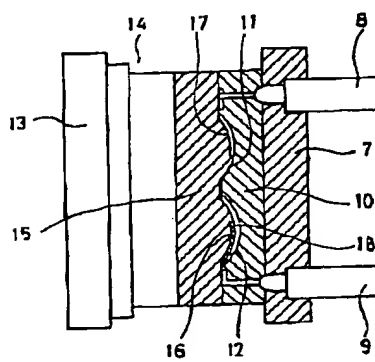
[Drawing 6]



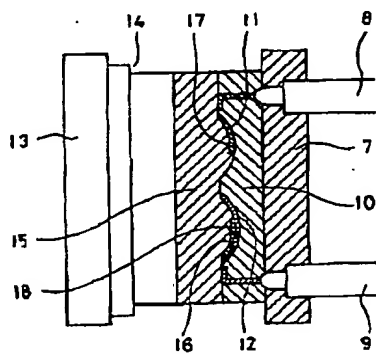
[Drawing 7]



[Drawing 8][Drawing 9][Drawing 10]

[Drawing 11][Drawing 12]

[Drawing 13]



[Drawing 14]

